

Montana Department of Transportation
Research Programs
February 2006

EXPERIMENTAL PROJECT

**EVALUATION OF RECYCLED RUBBER AND PLASTIC MATS AS WEED
PREVENTION AND EROSION CONTROL AROUND GUARDRAILS**

Location: Interstate 15; Great Falls District, Cascade County

Project Name: Great Falls N & S

Project Number: IM 15-5(101)270, UPN 4041

Type of Project: Experimental trial using recycled rubber and plastic mats as weed prevention and erosion control around guardrails

Principal Investigators: Craig Abernathy, Experimental Project Manager
Mark Baum, Construction Reviewer

Objective

The Departments current use of erosion and weed control around guardrails is to pave the area with asphalt cement (AC). The objective of this project is to test two products made from recycled rubber and plastic mats to determine if this could be a cost effective alternative to paving with AC.

Experimental Design

The design will include an AC control section and two test sections as follows;

STA 70+81.89 to 71+33.33 NB – AC control section
STA 71+97.40 to 72+92.65 SB

STA 70+66.64 to 71+73.32 SB – Durotrim Recycled Rubber Tire Mat (Type 1)
STA 71+97.38 to 73+84.07 NB

STA 70+59.03 to 71+73.33 NB – Universal Weed Cover Recycled Plastic Mat (Type 2)
STA 71+97.40 to 74+06.95 SB

Evaluation Procedures

Installation of all three sections (control, type 1, and type 2) will be monitored and documented by the principal investigators. An installation/construction report will be produced and distributed. Semi-annual inspections will include product durability involving degradation of product material by wind, sunlight, chloride or plow or mowing damage. Additional analysis will include effectiveness as an applicable weed and erosion control practice. Material and installation costs of all three sections will also be included. The image on the right is an example of the Universal Weed Control product.



Evaluation Schedule

Research will monitor performance for a period of five years semi-annually (pre-winter and spring inspections), with every year up to *ten years (informally). This is in accordance with the Department's "Experimental Project Procedures". There will also be adhoc visits to the site during full winter. Delivery of a construction/installation report, interim, annual or semi-annual reports are required as well as a final project report (responsibility of Research).

Summer 2006:	Installation	Research Installation/Construction Report
Late fall 2006:	Interim	Pre-Winter Inspection
2007-2011:	Semi-Annual Evaluation	Semi-Annual Reports
2012:	Final Evaluation	Final Report
*2012-2016:	Annual Evaluation	Annual Reports (Informal)

*If devices are still in-place